

Promab Biotechnologies' CAR-T new product development programs are being designed for pre-clinical and future clinical applications.

CAR-T cells can be used for:

1. Compound screening
2. Antibody screening
3. Co-stimulatory and activation domain comparison
4. Personalized medicine and donor variations for CAR-T screening
5. Checkpoint inhibitors
6. Safety switches and regulators of CAR-T functions
7. Pre-clinical in vivo models
8. Treg and T memory cells in CAR-T setting
9. CAR-T signaling, tumor microenvironment
10. Proof of concept studies for clinical trials

The structure of CAR from Promab:

CD19 and CD22 proteins are overexpressed in many hematological tumors. CD19-CD22-CAR-T cells with bi-specific Cd19-CD22 ScFv and with Cetuximab-regulated suicide switch can be used to target hematological cancers with increased safety.

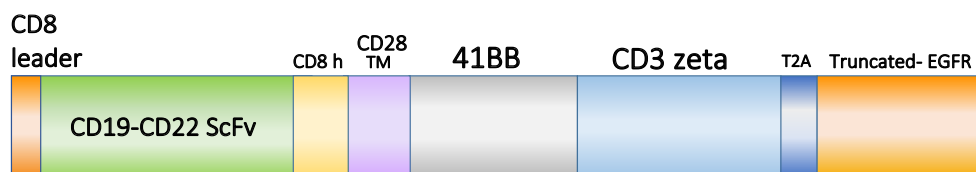


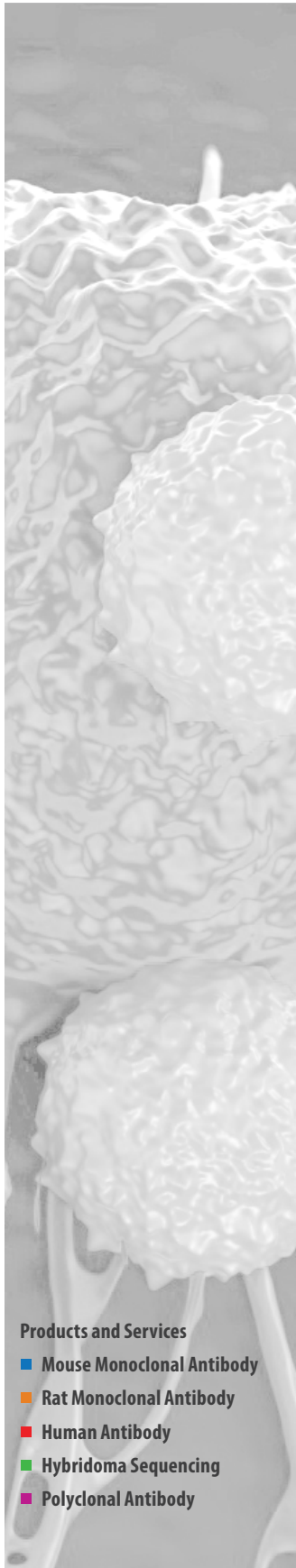
Figure 1. CAR-T cells expressing the above constructs are available from ProMab targeting CD19 and CD22 antigens. ScFv means single chain variable fragment. These CAR-T cells are generated with CD19-CD22-4-1BB- CD3 zeta CAR construct.

To date, ProMab has generated 2nd generation CAR and CAR controls (as shown in Figure 1). ProMab has also generated CAR-T cells and CAR-NK (Natural Killer) effector cells against cancer target cells that show excellent functionality, including dose-dependent and target cell-specific cytotoxic activity.

These CAR-T cells can be tested with target cells in cytotoxic assays and used for testing modulators of immune checkpoint inhibitors (PD-1, CTLA-4 pathways), activators of immune response, or small molecules affecting T-cell or T-reg activity.

Products and Services

- Mouse Monoclonal Antibody
- Rat Monoclonal Antibody
- Human Antibody
- Hybridoma Sequencing
- Polyclonal Antibody



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Data

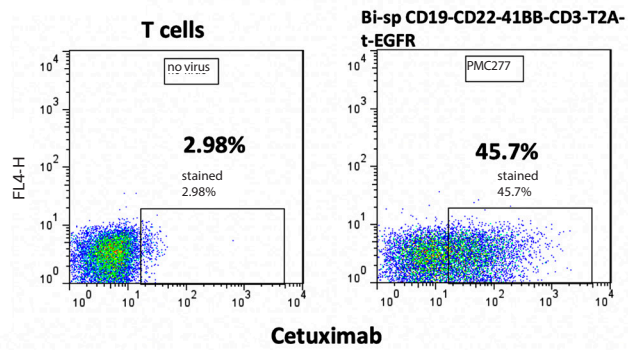


Figure 2. Cetuximab detects truncated EGFR (t-EGFR) switch.

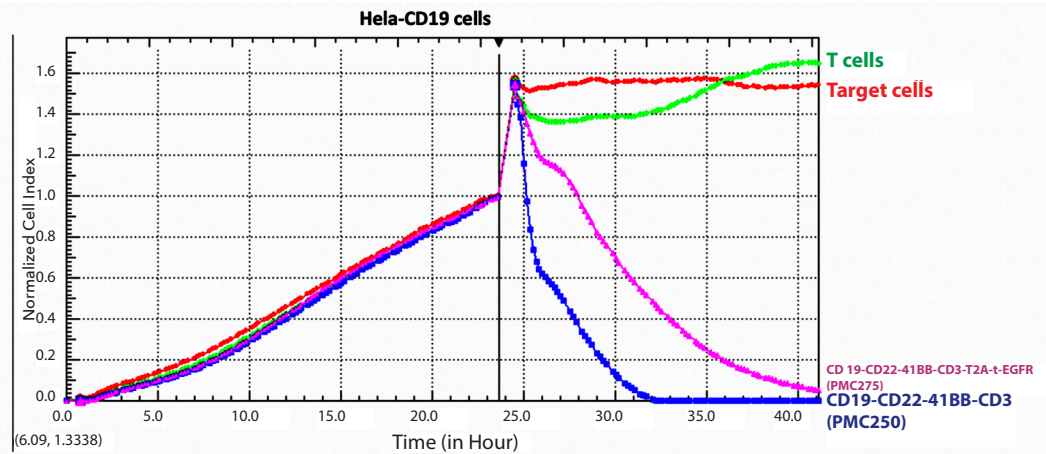


Figure 3. CD19-CD22-41BB-CD3-t2A-t-EGFR CAR-T cells kill Hela-CD19 cells

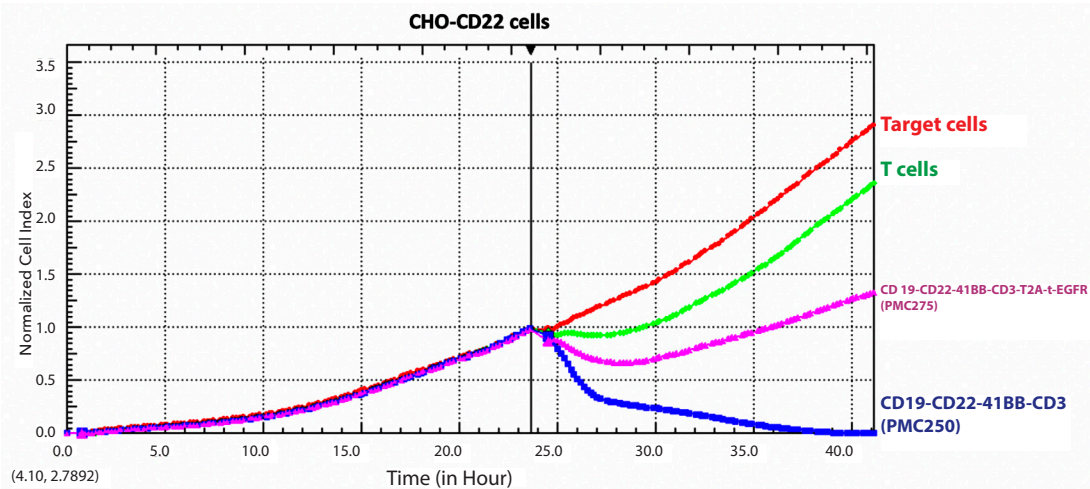


Figure 4 . CD19-CD22-41BB-CD3-t2A-t-EGFR CAR-T cells kill CHO-CD22 cells